

Notice of Allowability

Application No.

10/806,586

Applicant(s)

COOK, THOMAS CHRISTOPHER

Examiner

Art Unit

Jerry Martin Blevins

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed May 9, 2007.
2. ☒ The allowed claim(s) is/are 8-11, 17, 18, 21 and 31-37.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 3/23/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

Examiner thanks applicant for pointing out the error on the Office Action Summary from the most recent previous office action. Applicant is correct in assertion that box 2a was erroneously checked and that the correct status of the application was that of non-final rejection as of the mailing of said most recent previous office action. It was never in the examiner's intent to indicate a Final Rejection status, as can be ascertained from the omission of any paragraph concerning the office action being made final, and as such there is no need for retraction of the Final designation. Examiner apologizes for any unintentional ambiguity.

Election/Restrictions

Examiner accepts the amendment to claim 21 which places claim 21 within the same patentable scope as that of the remainder of the claimed invention, as indicated in claims 8-11, 17, 18, and 31-37. Therefore, the restriction and constructive election of claim 21 is withdraw. Furthermore, claim 21 is now examined on the merits.

Response to Arguments

Applicant's arguments, see pages 10-15, filed May 9, 2007, with respect to claims 8-11, 17, 18, and 31-37 have been fully considered and are persuasive. The

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rejection of claims 10, 11, and 17 and the objection to claims 8, 9, 18, and 31-37 have been withdrawn.

Allowable Subject Matter

Claims 8-11, 17, 18, 21, and 31-37 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 8, the prior art, as best exemplified by US 4,898,451 to Story, teaches a plurality of color-coded buffer tubes (Figure 2, abstract, column 2, lines 3-52), color-coded filling material disposed in each of the color-coded buffer tubes (Figure 2, abstract, column 2, lines 3-52), and a plurality of color-coded optical fibers disposed in each of the color-coded buffer tubes (column 1, lines 5-28). Story does not teach this combination in any one cable, or that any one cable has the provision of a first, second, and third level of color-coded identification. It would have been obvious to one of ordinary skill in the art at the time of the invention to include in one cable each of the limitations taught by Story. The motivation would have been to increase the number of individually identifiable fibers used in the cable. Story also does not teach that the color-coded filling material is a color-coded gel. However, US 6,208,790 to Zopf teaches color-coded gels as color-coded filling materials (column 1, line 66 – column 2, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the color-coded filling material of Story out of a gel material, as taught by Zopf. The motivation would have been to reduce the stress on the fibers (Zopf, column 1, line 66 – column 2, line 10). However, Story, either individually or in

combination with Zopf or the prior art in general, fails to disclose or render obvious the combination of the above limitations with color-coded gels comprising a fluorescent colorant.

Regarding claims 9 and 21, the prior art, as best exemplified by Story, teaches the similar limitations as outlined above in claim 8. However, Story, either individually or in combination with the prior art, fails to disclose or render obvious that at least two buffer tubes have a common color, at least two buffer tubes are filled with common color color-coded filling material, and at least two optical fibers have a common color.

Regarding claim 10, the prior art, as best exemplified by Story, teaches a cable comprising a plurality of buffer tubes; a plurality of color-coded optical fibers within each buffer tube, and color-coded filling material disposed within each buffer tube wherein each buffer tube contains a different color of filling material (Figure 2, abstract, and column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the cable of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. Story also does not teach at regular intervals, identifying marks attached to and circumscribing each buffer tube. Yamasaki teaches buffer tubes with identification marks (column 3, lines 36-67 and column 4, line 62 – column 5, line 59). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the

identification bands of Yamasaki in at least one buffer tube of Story. The motivation would have been to increase the number of individually identifiable buffer tubes.

However, Story, either individually or in combination with the prior art, fails to disclose or render obvious that at least two buffer tubes have common identifier marks, at least two buffer tubes are filled with color-coded filling materials that have a common color, and that at least two color-coded optical fibers have a common color.

Regarding claim 11, the prior art, as best exemplified by Story, teaches a system for identifying buffer tubes, comprising: a plurality of buffer tubes each having an inner wall circumferentially surrounding a respective set of optical fibers (Figure 2); and a color-coded filling material (abstract, column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the system of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. Story also does not teach at regular intervals, identifying band markings attached to and circumscribing at least one buffer tube. Yamasaki teaches buffer tubes with identification bands and tape (column 3, lines 36-67 and column 4, line 62 – column 5, line 59). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the identification bands of Yamasaki in at least one buffer tube of Story. The motivation would have been to increase the number of individually identifiable buffer tubes. Story also teaches color-

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coded buffer tubes (abstract and column 2, lines 3-26). Story does not teach non-color-coded filling material and transparent buffer tubes, wherein the non-color coded filling material is disposed within the color-coded buffer tubes and the color-coded filling material is disposed within the transparent or translucent buffer tubes. Zopf teaches non-color-coded filling material and transparent buffer tubes, wherein non-color-coded filling materials can be disposed within color-coded buffer tubes and color-coded material can be disposed within transparent buffer tubes column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Story with the teachings of Zopf. The motivation would have been to increase the number of individually identifiable fibers used in the cable. Story also does not teach a gelatinous filling material which essentially occupies all of the internal volume. Zopf teaches color-coded gelatinous filling materials occupying essentially all of the internal volume (column 1, line 66 – column 2, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the color-coded filling material of Story out of a gel material which essentially occupies all of the internal volume, as taught by Zopf. The motivation would have been to reduce the stress on the fibers (Zopf, column 1, line 66 – column 2, line 10). However, Story, either individually or in combination with the prior art, fails to disclose or render obvious that at least two buffer tubes have a common identifying band marking, at least two buffer tubes have a common color code and at least two buffer tubes are filled with color-coded materials that have a common color.

Regarding claim 17, the prior art, as best exemplified by Story, teaches a system for identifying optical fibers comprising a plurality of buffer tubes; color-coded optical fibers, and color-coded filling material disposed within at least one of the buffer tubes (Figure 2, abstract, and column 2, lines 3-52). Story also teaches that each buffer tube contains a different color of filling material (Figure 2, abstract, and column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube providing an internal volume (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). Zopf also teaches color-coded gelatinous filling materials occupying essentially all of the internal volume (column 1, line 66 – column 2, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the cable of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. It also would have been obvious to one of ordinary skill in the art at the time of the invention to make the color-coded filling material of Story out of a gel material which essentially occupies all of the internal volume, as taught by Zopf. The motivation would have been to reduce the stress on the fibers (Zopf, column 1, line 66 – column 2, line 10). However, Story, alone or in combination with the prior art, fails to disclose or render obvious that the gelatinous filling material comprises one of pythalocyanime, azo dye, chromium oxide, lake pigment, quinolone, and lithopone.

Claims 32-37 are allowed based on their dependence from allowed base claim 17.

Regarding claim 18, the prior art, as best exemplified by Story teaches a system for identifying optical fibers comprising a plurality of buffer tubes; color-coded optical fibers, and color-coded filling material disposed within at least one of the buffer tubes (Figure 2, abstract, and column 2, lines 3-52). Story also teaches that each buffer tube contains a different color of filling material (Figure 2, abstract, and column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube providing an internal volume (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). Zopf also teaches color-coded gelatinous filling materials occupying essentially all of the internal volume (column 1, line 66 – column 2, line 10). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the cable of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. It also would have been obvious to one of ordinary skill in the art at the time of the invention to make the color-coded filling material of Story out of a gel material which essentially occupies all of the internal volume, as taught by Zopf. The motivation would have been to reduce the stress on the fibers (Zopf, column 1, line 66 – column 2, line 10). However, Story, alone or in combination with the prior art, fails to disclose or render obvious the combination of the above limitations with a gelatinous filling material comprising a pearlescent colorant.

Regarding claim 31, the prior art, as best exemplified by Story, teaches a cable comprising a plurality of buffer tubes; a plurality of color-coded optical fibers within each buffer tube, and color-coded filling material disposed within each buffer tube wherein

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each buffer tube contains a different color of filling material (Figure 2, abstract, and column 2, lines 3-52). Story does not teach that the buffer tubes are transparent or translucent. Zopf teaches a transparent buffer tube (column 3, lines 32-42 and 53-61 and column 4, line 60 – column 5, line 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the transparent buffer tube of Zopf in the cable of Story. The motivation would have been to increase visibility of the colored filling material and thereby improve the color-coding of the individual buffer tubes. Story also does not teach at regular intervals, identifying marks attached to and circumscribing each buffer tube. Yamasaki teaches buffer tubes with identification marks (column 3, lines 36-67 and column 4, line 62 – column 5, line 59). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the identification bands of Yamasaki in at least one buffer tube of Story. The motivation would have been to increase the number of individually identifiable buffer tubes. However, Story, either individually or in combination, fails to disclose or render obvious that at least three buffer tubes have a common color and at least three optical fibers have a common color.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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